REMARKS

The Office examined claims 1-19 and rejected same. With this paper, claims 2 and 12 are canceled, claims 1 is amended, and none are added. The application now includes 17 claims.

Claim Rejections under 35 USC §102

On page 3, section 1 of the Office Action, claims 1-6 and 8-19 are rejected under 35 USC §102(b) as being anticipated by Japanese Patent JP-A-43-1487.

The present invention relates to a polyvinyl alcohol (PVA) film which dissolves in water at 20°C within 10 minutes and has an α/β ratio of not more than 10, wherein α is a storage modulus of the film at 20°C in a dry atmosphere and β is a storage modulus of the film at 20°C and 80% RH (relative humidity). The film is further characterized in that the film has a glass transition temperature of not more than 20°C (as amended in claim 1).

JP-A-43-1487 discloses a cold water-dispersible PVA film comprising (A) a high hydrolysis PVA having a degree of hydrolysis of at least 97% by mole, (B) a low hydrolysis PVA having a degree of hydrolysis of 75 to 92% by mole and (C) a starch. JP-A-43-1487 does not disclose a glass transition temperature of the so-composed PVA film.

In rejecting claims 1 and 2, the Office states that: "In view of the substantially identical PVA composition between JP-A-43-1487 and instant claims, it is the examiner's position that JP-A-43-1487's polyvinyl alcohol composition inherently possesses these properties." The applicant respectfully disagrees.

By comparing the difference in elongation between the PVA film of instant application and the PVA film of JP-A-43-1487, it can be concluded that the PVA film of JP-A-43-1487 has a higher glass transition temperature than that of the PVA film of instant application. The elongation measurement of the PVA film in Examples 1-3 of the current application was performed at a temperature of 20°C, same as the temperature as disclosed in JP-A-43-1487 for performing the elongation measurement (see page 2, endnote 1 of Table 1 in the original Japanese publication). The elongation of the films of Examples 1-3 was high, at well above 200%, because the glass transition temperatures of those films are lower than the temperature for performing the elongation measurement. On the other hand, the elongation of the films in Examples 1-8 of JP-A-43-1487 was low, at no more

than 70%. Such a low elongation rate indicates that the measurement was performed at below the glass transition temperatures of the films. Therefore, the films in the Examples 1-8 of JP-A-43-1487 have glass transition temperatures higher than 20°C. The testing results can be found in a Declaration under 37 CFR 1.132, filed herewith.

Based on the above, the film as claimed in claims 1 and 2 (now combined) is different from the film disclosed in JP-A-43-1487.

The PVA film of the present invention has excellent cold water solubility and durability such that change in appearance of the film under high humidity is slight. In fact, because of the low glass transition temperature, the cold water solubility of the film is only slightly decreased, even if unit-dose packages made therefrom are stored for a long term. Also, because of the low glass transition temperature, the film has excellent flexibility in ambient temperature and is very useful in packaging of liquid chemicals. The time up to the dissolution of the films in cold water (temperature 5°C) in Examples 1 and 2 of the present application is 50 seconds and in Example 3 it is 60 seconds. If the glass transition temperature of the film were higher, for example more than 20°C, the mechanical strength of the film would be significantly affected by the environment conditions (page 15, lines 14-16 of the instant specification). Therefore, for the intended purpose of water-soluble packaging, it is preferred that the film has a low glass transition temperature. JP-A-43-1487 discloses that the film is firm and low in elongation (page 1, right column, line 12) and does not dissolve rapidly in cold water, but disperses promptly and finely into water (page 1, right column, lines 29-31). The present invention, which has excellent cold water solubility, cannot be expected from the film of JP-A-43-1487 because the latter is easily dispersible but not easily dissoluble in cold water.

Based on the above, claim 1 is patentable in view of the cited reference. Applicant respectfully requests the rejection be reconsidered and withdrawn.

Claims 3-6 and 8-19 depend directly or indirectly from claim 1. Since claim 1 is believed to be patentable, these claims are believed to be patentable due to their dependency. Applicant respectfully requests the rejections of these claims be reconsidered and withdrawn.

Claim Rejections under 35 USC §103

On page 4, section 2 of the Office Action, claim 7 is rejected under 35 USC §103(a) as being unpatentable over (JP-A-43-1487) in view of Nishiguchi *et al* (JP 10-060207).

Claim 7 depends from claim 3, which, in turn, depends from claim 1. Since claim 1 is believed to be patentable, claim 7 is patentable as well. Applicant respectfully requests the rejection of claim 7 be reconsidered and withdrawn

Declaration under 37 CFR 1.132

A Declaration under 37 CFR 1.132 is filed with this paper. Applicant respectfully requests the consideration of the Declaration by the Office.

Conclusion

For all the foregoing reasons, it is believed that all the claims of the instant application are patentable, and their passage to issue is earnestly solicited. Applicant's agent urges the Examiner to call to discuss the present response if anything in the present response is unclear or unpersuasive.

Respectfully submitted,

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